18:Ingrams G-3 (1934-36)1938 MM2 Hadhramaut MM2

them from retaliation on the Sei'ar, the traditional enemies of most of the Hadhramaut.

The men of the Manahil, Mahra, and those distant sections of the Kathiri who live up amongst the Mahra on the confines of the desert, take their mothers' names and not their fathers. Ordinarily of course Arabs call themselves Hassan bin Muhammad for example, but these people say Hassan bin Maryam. The Manahil and the Hamumi and some of the other tribes are almost exclusively monogamous and the women, who in some parts are not veiled, are extraordinarily free. A man proposes marriage to the woman direct, and her father will say it is not his concern. Bride price is very high, but the bride brings a lot of stock with her.

I have not journeyed far down the Wadi Maseila on the ground during the last tour, though I had been invited to attend the pilgrimage to the tomb of the Prophet Hud. However as I had not the time to go Seiyid Bubekr took me on the first aerial pilgrimage, as he called it, and the beautiful tomb in its picturesque surroundings crowded with a record pilgrimage presented a great contrast to the last time my wife and I had seen it, out of season when we were travelling down the wadi to Seihut. I noticed on this occasion the ruins of an ancient town on the very edge of the *jol* above 'Einat, and I think these are about the only ruins there are in such a situation in the Hadhramaut.

There is perhaps no need to say more of the big towns of the wadi, Tarim, Seiyun, and Shibam, or of the fertile lands between them now happily all at peace. The famous trench system of Al Ghurfa is now disused and the town is open to traffic, so that cars no longer have to skirt perilously round its walls. The whole place has been green with crops, a record millet crop last year and a record barley crop which was being harvested when I left in April.

Seiyun has changed in some ways, for like Tarim it has a new landing-ground used not only by the Royal Air Force but by civil machines, and in the town itself I have an office—for I am also Resident Adviser to the Kathiri Sultan—and there is a newly uniformed body called the Kathiri Armed Constabulary recruited mainly from the Sultan's slaves. I think it is generally known now that these so-called slaves are in fact much more independent than many free men, but it may not be so well known that with the full agreement and co-operation of the Sultans steps have been taken to grant freedom to any slave who desires it. The camel park has been moved from beneath the palace and there preparations are being made to lay out a small garden surrounded by the arcade in which are the police station, the post office, and a small dispensary.

Seiyid Bubekr's house which was being built when we first visited Seiyun three years ago is now finished. Its architecture is, I think I may say, not approved of by Miss Stark, as she no doubt will tell you, but it is a remarkably comfortable house, and when the family is living there a very happy house to stay in; but for some months Seiyid Bubekr's family has preferred to live in another big house of the old-fashioned kind in the town. Living in the empty Dar es Salaam, as it is called, gave me so much the feeling that my wife and I once had when we spent a day or two as the only guests in an enormous hotel in Belgium out of season that I prefer to live in the other house with Seiyid Bubekr. Many are the people who have enjoyed his kindly

4:Meulen and Wissmann T-3 (1931)1932 MM2 Hadhramaut MM2

621 We had not received favourable reports of Wādī ʿAmd. The el-Aṭṭās family, nevertheless, maintained the contrary; it is their wādī and the Djaʿdī Bedouins who inhabit it are allied with them and are, in a certain sense, under their control, but it is hard to discover how far this control goes. We got the impression that the wādī was very much armed and ready for war. The landscape is barren and, at first, monotonous; the *sēl*-bed is broad and filled with bluish-white, small boulders. Conditions must have been much better in the old days, for the numerous ruins suggest a dense population.

341 231 243 It is long after sunset before we reach Nukhr, where the el-ʿAṭṭās family own a house. The place consists of a few huts and a half tumble-down mud house, in which a room has been prepared for us. It is too warm to spend the night indoors, but the staircase leading to the roof has collapsed. In the middle of the hamlet there is a storehouse for fodder, half below and half above the ground. Its roof is about three feet above the ground and has a parapet about one and a half feet high. The basin thus formed is smoothly plastered with mud, and the grain is thrashed in it after harvesting. It makes a hard but safe sleeping place.

172 312 241 On the following day, June 10th, we set off again southwestwards. At first the wādī is very monotonous and barren and the *sēl*-bed widens considerably. After two hours' riding Wādī ʿAmd makes a bend towards the south and then very soon one comes across date plantations. There are an increasing number of ruins of what, presumably, were defence works, situated on hill-tops. The palm plantations have suffered much from the drought in recent years, as for two years there was neither rain nor *sēl* of any considerable quantity. The subsoil water is far from the surface and wells are 300 to 450 feet in depth so that they are not used for purposes of irrigation but only for supplying drinking-water. Groups of men hoist up the water, singing monotonously the while.

241 312 Further southwards the plantations increase and form an unbroken girdle between the broad, wild *sēl*-bed and the wes-

5:Gt. Brit., Colonial Office G-3 (1947) 1949 MM1 Aden
Hadhramaut MM2

315 A party from Petroleum Concessions Ltd. arrived in November and, after visiting Hadhramaut, went east along the coast to prospect the Mahra area.

Chapter 7: Agriculture, Fisheries and Forestry

AGRICULTURE

General

132 There was rain in the west of the Hadhramaut and in the Eastern coastal [312] area in February, and in June and August good rains in the Hadhramaut formed a new lake above the recently finished Nuqra dam. The spring 243 wheat and barley crops were satisfactory. Efforts to persuade the farmers to grow barley rather than wheat continued and towards the end of the year some effect was noticed, partly owing to the discovery of a way of cooking the barley so as to make it acceptable as food; experiments in machine grinding were also started.

Staff

647 The staff of the Department of Agriculture consists of a Director, two Agricultural Officers, an Agricultural Assistant, an Engineer Assistant and six Agricultural Instructors.

Land Utilisation

312 Lack of rainfall imposes a severe limitation on crop production in the Protectorate. Highly developed conservation measures, run-off 311 control, flood irrigation and artificial irrigation are employed to secure arable land production. The percentage of arable land to the desert and range is estimated at 0·33 per cent. Established pastures and meadows are unknown. Dry forest scrub is found on the Island of Socotra and in the far Eastern Mahra Coast.

Crop Production

241

Western Aden Protectorate

	Acres	*Tons*
Millet—sorghum	60,000	12,000
Bulrush millet and other small millets	10,000	1,500
Wheat	1,500	750
Barley	4,500	3,000
Sesame	10,000	1,000

Eastern Aden Protectorate

Millet—sorghum	20,000	4,000
Bulrush millet and other small millets	3,000	500
Wheat	3,500	2,500
Date palms	10,000	5,500

6:Gt. Brit., Colonial Office G-3 (1948) 1950 MM1 Aden
Hadhramaut MM2

Market Conditions

Food grain prices showed no reduction during the year. Prices at the main coastal centres of Aden and Mukalla fluctuated between £25 and £37 per ton, the higher rates being recorded in Mukalla towards the end of the year, when famine conditions were confirmed in the Hadhramaut. 435

The price of sesame seed fell from the high levels of 1947, and the price during the year varied between £60 and £70 per ton.

The Maria Theresa dollar exchange dropped 23½ per cent at the end of the year, Rs. 186 being asked for 100 dollars.

Demonstration and Experiment

In the Hadhramaut the introduction of barley passed the third season; it may be claimed that the crop has found favour and that it is most likely to become well established in the economy of the country. The object of this introduction was to obtain a more dependable crop for winter sowing. Wheat was in the past the winter crop, and always a risky one owing to the danger of rust attacks. Barley in southern Arabia is regarded as a safer crop in all respects, but for some reason it escaped the attention of farmers in the Wadi Hadhramaut. 242 243 248

In Abyan cotton variety X1730A was grown on a field scale on Abyan Board tenants' land. The crop was sown on land inundated in August with approximately three feet of water. No other water was applied after sowing. At the end of the year, the crop appeared most promising.

Plant Introduction

Three-hundred and fifty apricot, 350 Japanese plum, and 24 peach trees were imported from South Africa, for sale to farmers on the Audhali Plateau.

One hundred citrus trees were imported from Eritrea, for planting and distribution in Abyan.

Development Schemes: The Abyan Board

Work on improvement of the systems of the Na'aza and Ba Tes canals was carried out in the first nine months of the year. A stone regulator at Ba Tes head an ' a series of stone drops and regulators were installed on this system and on part of the Na'aza system. Much work remains to be done, and in a manner which will allow of the improvement to be incorporated in the general plan of development [illegible] the area. 242 241

Following further examination of the area by Mr. N. Simansky, Irrigation Adviser, it was possible to submit an application for a loan of £250,375 from the Colonial Development and Welfare Fund. Sanction for this loan was obtained in July, and work started in the last quarter of the year. Machinery and cement were ordered, while local purchases were made from ex-War Department stocks held in Aden. At the end of the year, two Agricultural Officers, one of whom acted as manager to the Board, one British and three Italian surveyors, and one British accountant, together with a large Arab staff were employed on the scheme.

The development programme of the Board continued side by side with

8:Gt. Brit., Colonial Office G-3 (1951-52)1954 MM1 Aden
Hadhramaut MM2

APPENDIX I

THE ABYAN SCHEME

Purpose

(a) To utilise all surface flow and suitable underground supplies of water in order to develop and maintain irrigation farming in the Abyan district.

(b) To organise and develop the production of food crops and cash crops, and to assist in their marketing.

(c) To increase the wealth and prosperity of the people and the Governments of the local States and of the Protectorate.

Background

The Abyan district is one of ancient development for irrigation farming. Centuries of insecurity made the area derelict, until the settlement of a feud and the entry of H.M. Government to maintain law and order.

From 1941 to 1943 efforts were made to restore, by traditional methods, irrigation of the southern part of the district. In 1943 Government entered the derelict areas of the southern and central sections and a four-year development plan was started to restore and maintain irrigation systems on traditional lines. Control was in the hands of the Department of Agriculture; funds were provided by the Colony of Aden as part of the increased food production campaign; irrigation charges of one-quarter share of the crop were levied.

In 1947 the Abyan Board was formed by an administrative order of the Governor of Aden. The Board was accepted by the two States whose territories were covered by the schemes. In December, 1948, a loan of £20,000 was approved from Colonial Development and Welfare funds. In August, 1948, a further £250,000 was approved. With these funds the Board embarked on the initial stages of its plan of development.

Organisation

Development was on a partnership basis between:

(a) Landowners (the States, private individuals or trusts) who provide land;

(b) owner occupiers and tenant farmers who provide the working animals, implements, general farming capital, and the labour for crop production; and

(c) the Board, a development authority, which undertakes the construction of irrigation works, maintains the irrigation system, and regulates the distribution of irrigation water. The Board also maintains special control over the cotton crop which is sold to the Board at agreed prices, processed in the Board's ginneries, and sold to the Raw Cotton Commission.

Up to 1949-50 agricultural production was primarily concerned with the cultivation of sorghum and sesame. Trials with long-staple

8:Gt. Brit., Colonial Office G-3 (1951-52)1954 MM1 Aden
Hadhramaut MM2

654 which carry the water to bunded fields where the land is inundated to
312 approximately one metre in depth. In the lower part of the district complete diversion of the flood is made by larger earth dams built
241 across the river bed. Generally one metre depth of water is sufficient to raise the crops of sorghum, sesame and cotton, though summer planted crops which have to grow when water is low are given one or two supplementary irrigations.

The date of arrival of the floods is uncertain and the pattern of crop production may alter considerably according to the date of irrigation. For instance, early summer floods will only be used for sorghum fodder, grain, melons and sesame. Later summer irrigations are particularly required for cotton planting and for the autumn sown sorghum crop.

The Farming System

Skilled cultivation is carried on by settlers from many South Arabian tribes who have come to the area since the start of the scheme. Bunding of land, construction of field channels, ploughing and sowing are carried out by draught animals, mainly oxen though camels are brought in to help occasionally. No fertilisers are used at present ; the flood brings with it a heavy burden of silt which reaches the land and maintains its fertile state.

The basic problems concern the farming system. One is largely an irrigation problem caused by a rapid rise in the water-table which has taken place since irrigation was resumed. This rise in the water-table has caused an accumulation of salts in the upper layers of the soil, and has already made crop production on 2,000 acres practically impossible by flood irrigation methods. The other problem is weed control. As a gross area of 100,000 acres may be commanded in the future, and within this area an annual average of 30,000 acres may be cropped, it should be possible to afford long periods of fallow to land in order to reduce the dangers which may arise from heavy irrigation ; but individual ownership of land will greatly complicate such arrangements.

248 At the present time the cotton variety X.1730A, a derivative of
243 Sakel, is the main cash crop grown. All other cash crops in the
246 scheme are common to those of other irrigation tracts of a similar type in South Arabia though there are experimental crops, of which sugar is one. An important feature of the scheme is the need for a large area of sorghum for grain and fodder production. The draught animals depend almost entirely on sorghum fodder for their sustenance and the main food of the people is sorghum millet. It is expected that for some time two-thirds of the area will be maintained under sorghum and one-third under cotton.

Mechanical Equipment

406 The Board owns earth-moving machinery powered by diesel-engined
243 crawler tractors with carry-all scrapers, bulldozers, a ripper and grader and two drag-line scrapers. The policy of the Board is to increase the